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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,363	12/31/2003	Krishna Bharat	Google-44 (GP-096-00-US)	4908
83,402	7590	11/10/2009	EXAMINER	
Straub & Pokotylo 788 Shrewsbury Avenue Tinton Falls, NJ 07724			AUGUSTIN, EVENS J	
			ART UNIT	PAPER NUMBER
			3621	
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			11/10/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/750,363

Applicant(s)

BHARAT ET AL.

Examiner

EVENS J. AUGUSTIN

Art Unit

3621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 5-33, 35 and 37-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-33, 35 and 37-66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/55/06)
Paper No(s)/Mail Date 05/04/09 and 09/11/09
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Acknowledgements

1. This is in response to an amendment filed on 07/01/09. Claims 1, 3, 5-33, 35 and 37-66 are pending and have been examined.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3, 5-33, 35 and 37-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herz et al. (U.S 5,754,939) ("Herz"), in view of Rose et al. (U.S 5724567) ("Rose").
4. As per claims 1, 3, 5-33, 35 and 37-66, Herz et al. discloses a computer system for evaluating customer and document/object profiles to automatically generate "target profiles" that most likely will interest the user. The computer system comprises apparatus with means (column 28, lines 43-67, columns 29, 30, figures 1 and 2) to do the following:
 - A. Herz includes the appropriate hardware/software combination (C28, L47-67) enabling the steps below;
 - B. ("determining, with a computer system including at least one computer on a network, initial user profile information for the user using information included in past search queries submitted to a search engine by the user, wherein such information is

independent of documents returned as search results to the past search queries;" –
(Determining user profile attributes such as age and zip code (physical location) (column 4, lines 54-55). The prior art also teaches that the user profile is determined based on the user's search query and not the actual result of the search, C66, L57-67);

- C. ("inferring, with the computer system, user profile information for the user;" –
According to Merriam-Webster's dictionary, the word "infer" has the following definitions: 1 : to derive as a conclusion from facts or premises <we see smoke and infer fire — L. A. White> — compare imply, 2 : **guess**, surmise <your letter...allows me to infer that you are as well as ever — O. W. Holmes 1935>, 3 a : to involve as a normal outcome of thought b : to point out : indicate <this doth infer the zeal I had to see him — Shakespeare> <another survey...infers that two-thirds of all present computer installations are not paying for themselves — H. R. Chellman>, 4 : **suggest**, hint <are you inferring I'm incompetent?>. For the purpose of examination, the word "infer" is being interpreted synonymously with guess or suggest. As such, the prior art can "guess" the user's likes or dislikes based on the user's search profile, C5, L21-25. Additionally, the prior art can actively generate a user's interest or passively infer a user interest in subject, C17, 33-35;
- D. ("determining, with the computer system, the user profile information for the user using both the initial user profile information and the inferred user profile information;" –
(Determining both user profile such as age, and inferred user interest C4, L54-60);

- E. ("controlling, with the computer system~ the serving of an advertisement to the user using the determined user profile information") – The ability to match user's interests with advertisement, C7, L4-10;
- F. ("determining initial user profile information for the user using information included in past search queries submitted to a search engine by the user, wherein such information is independent of documents returned as search results to the past search queries;") --The system also stores profiles of documents which enables a user to access target objects of relevance and interest to the user without requiring the user to expend an excessive amount of time and energy (column 4, lines 35-42) – User profiles determined from past searches submitted by user (column 4, lines 58-61);
- G. ("the initial user profile includes a plurality of attributes, each of the plurality of attributes having a value and a score") --Attributes having values (column 10, lines 8-9, line 52, column 12, line 58) and scores (column 12, lines 60-67, column 13, lines 1-9). The score represents the frequency in which a particular attributes appears in a document. Thus, the score represents the likelihood of particular attribute being correct;
- H. Re: claims 7, 20, 39, 52, the prior art teaches that a node being examined as a device that is connected, as part of a computer network and the way data is stored in those devices so that it can be used efficiently. The edges are being examined as a set of connections or links between objects or nodes. In figures 1 and 2, these devices consist of information servers (figure 1 items I1 and In), vendor servers (figure 1, items V1 and Vn) and user devices (figure 2, items T1-Tn). These nodes and links are further represented in figures 3 and 4. The information servers contain the target documents (column 26, line 37,

column 29, line 1-5) being requested and accessed by the user (column 28, 66-67, column 29, lines 1-5). The system can link users to documents based on users' interest to the documents or other documents associated with each link (column 60, lines 62-64);

- I. Getting a summary of digital profiles of target objects that user likes or dislike (column 4, lines 56-58). The system can also infer the user/document interest (profile) from the user's behavior (column 17, lines 33-35). For example, the system might monitor which documents the user chooses to read, or not to read, and how much time the user spends reading them (column 17, lines 35-38) - ("inferring user profile information for the user;") ; ("determining the user profile information for the user using both the initial user profile information and the inferred user profile information")
- J. Getting user profiles determined from past searches submitted by user (column 4, lines 58-61) – ("the act of determining an initial user profile information for the user further uses past document selections by the user")
- K. The system can relate a user with past searches words such past interest in films whose review text (attribute h) contains words like "chase," "explosion," "explosions," "hero," "gripping," and "superb" (column 10, lines 37-42). The system can also record **associations** between documents (movies) and **users** column 10, lines 43-46). A good indication that the user wants to rent a particular movie is that the user has previously rented other movies with similar attribute values. For example, if the user has often liked movies that customer 1 and customer 2 have rented, then the user may like other such movies. Since the system can system relationships between users and documents one skilled in the art could easily infer from these relationships to create graphs (column 10,

lines 46-53). With regard to the aspect of “(adding edges between nodes, if there is an association between the nodes to define a graph,”) can be interpreted as equivalent to “not adding edges between nodes, if there is no association. Therefore, that limitation does not have to happen, and can be interpreted as such;

- L. (“inferring user profile information for the user using a topology of the graph and user”) Mapping/graphing a user target profile interest summary indicative of said user's access patterns to target objects and sets of target object characteristics to said user pseudonym (C79, L8-10);
 - M. Attributes are multiplies by a weight, a weighted attributes are added together (column 18, lines 63-67, column 19, lines 1-7) –
 - N. The system gathers documents with similar profiles, based on their content. In this case, the system gets information about intrinsic properties of users and/or documents (column 23, lines 55-65) –
 - O. System using document meta data (column 11, lines 4-15)
5. Herz et al. does not explicitly describe an invention with a node that represents document or users.
6. However, Rose et al. describes an invention that is directed to information access in multiuser computer systems, and more particularly to a computer-based information system that enables users to access information from a wide variety of sources. According to Rose et al., each term, e.g. each word, in a document can be assigned a weight, based on its statistical importance. Thus, for example, words which frequently occur in a particular language are

given a low weight value, while those which are rarely used have a high weight value. The weight value for each term is multiplied by the number of times that term occurs in the document. Referring to FIG. 5A, the results of this procedure is a vector of weights, which represents the content of the document (Col. 6, Line 9-17). "Each user profile also comprises a vector, based upon the user's indications as to his relative interest in previously retrieved documents. Each time a user provides a new response to a retrieved message, the profile vector is modified in accordance with the results of the indication. For example, if the user indicates interest in a document, all of the significant terms in that document can be given increased weight in the user's profile "(col. 6, lines 28-35). "A score of the document's relevance can be indicated by the cosine of the angle between that document's vector and the user's profile vector. A document having a vector which is close to that of the user's profile, such as Document 4, will be highly ranked, whereas those which are significantly different will have a lower ranking, for example Document 1" (col. 6, lines 55-60, Fig. 5B).

7. The edges appear to be the actual association line between users and documents (see Fig. 10, item 1074). As such, the table in figure 6 of Rose shows on the Y axis the different documents and the X axis the different users associated with these documents. Therefore, once these relationships are established it would have been obvious for one skilled art at the time of applicant's invention to draw lines or edges between the documents that are associated with particular users.
8. Therefore, it would have been obvious for one skilled in the art to have a system that have graphical representation of users and/or document. The motivation for one skilled to use graph would be to establish relationships between the user and/or document.

Response to Arguments

1. The United States Patent and Trademark Office has fully considered the applicant's arguments filed on 07/01/09, but has not found those arguments to be persuasive.

Argument 1: Prior Art does not teach the aspects of ("determining, with a computer system including at least one computer on a network, initial user profile information for the user using information included in past search queries submitted to a search engine by the user, wherein such information is independent of documents returned as search results to the past search queries;")

Response 1: The prior art by Herz teaches determining user profile attributes such as age and zip code (physical location) (column 4, lines 54-55). The prior art also teaches that the user profile is determined based on the user's search query and not the actual result of the search, C66, L57-67). Based on the query, Herz can infer certain information about a user.

Regarding the aspect of past search queries, the prior art by Herz teaches that user attributes can be based on previously retrieved documents/queries (C20, L24-26).

Regarding the aspect of nodes and graphs, par. 111 of applicant's published specification teaches "In one exemplary embodiment of the present invention, the association information 1070 may be a graph in which users and documents are represented as nodes 1072 and 1076, respectively". Therefore, a node appears to be an association of user and document. As such, Fig. 5A of Rose teaches "each user profile also comprises a vector, based upon the user's indications as to his relative interest in previously retrieved documents. Each time a user provides a new response to a retrieved message, the profile vector is modified in accordance with

the results of the indication". Another representation of a user-document node can be found in Fig. 6 of Rose. "Referring to FIG. 6, each time a user retrieves a document and subsequently provides an indication of interest, the result can be stored in a table 42. Using the information in this table, a correlation matrix R can be generated; whose entries indicate the degree of correlation between the various users' interests in commonly retrieved messages" (Rose, C7, L6-10). Both of these representations are topologies or configuration (Per Merriam Webster's dictionary) of user-document of interest or inferred interests by user.

Application stands finally rejected.

Conclusion

2. **THIS ACTION IS MADE FINAL.** Any new ground(s) of rejection is due to the applicant's amendment. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
3. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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4. In determining patentability of an invention over the prior art, the USPTO has considered all claimed limitations, and interpreted as broadly as their terms reasonably allow. Additionally, all words in the claims have been considered in judging the patentability of the claims against the prior art.
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EVENS J. AUGUSTIN whose telephone number is 571-272-6860. The examiner can normally be reached on 10am - 6pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Fischer can be reached on (571)272-6779.

/Evens J. Augustin/
Evens J. Augustin
November 10, 2009
Art Unit 3621